WHAT IS CLAIMED IS:

1. A liquid-phase growth process for continuously growing a crystal film on a plurality of substrates with respect to their one side surfaces, characterized in that said plurality of substrates are kept afloat on the surface of a flowing solution for liquid-phase epitaxy which comprises a crystallizing material dissolved in a solvent in a supersaturated state and which is flowing in a solution flow passage, and while said plurality of substrates being moved by virtue of said flowing solution in said solution flow passage, a crystal film is grown on the surfaces of said plurality of substrates which are in contact with said flowing solution.

2. The liquid-phase growth process according to claim 1, wherein said plurality of substrates are arranged along said solution flow passage of said flowing solution, of said plurality of substrates thus arranged, one or more of them which are positioned in a downstream region of said solution flow passage are recovered, and the remaining substrates positioned on an upper stream side than said recovered substrates are moved toward a downstream direction of said solution flow passage by virtue of said flowing solution.

3. The liquid-phase growth process according to claim 1, including a step wherein said plurality of

substrates are moved by virtue of said flowing solution and a step wherein said plurality of substrates are stopped such that they stay on said flowing solution while being kept afloat thereon.

4. The liquid-phase growth process according to claim 1, wherein said flowing solution is flown in said solution flow passage at a velocity which is faster than an average speed for said plurality of substrates to be moved.

5. The liquid-phase growth process according to claim 1, wherein a separation member is arranged between each adjacent two substrates of said plurality of substrates.

6. The liquid-phase growth process according to claim 1, wherein said flowing solution has a temperature gradient along said solution flow passage.

7. The liquid-phase growth process according to claim 1, wherein said flowing solution is flown in said solution flow passage such that the velocity thereof is varied along said solution flow passage.

8. The liquid-phase growth process according to claim 1, wherein said flowing solution is recovered at an end portion of said solution flow passage of the flowing solution and a crystallizing material is dissolved in said recovered solution, followed by being flown in said solution flow passage.

9. The liquid-phase growth process according to claim 1, wherein said solution flow passage has a grade which is gently sloped in a direction from the upstream side thereof toward the downstream side thereof so as to allow said flowing solution to flow in said solution flow passage at a desired flow speed.

10. The liquid-phase growth process according to claim 1, wherein said plurality of substrates have a density which is smaller than that of said flowing solution.

11. A liquid-phase growth apparatus for continuously growing a crystal film on a plurality of substrates with respect to their one side surfaces, comprising a solution supply crucible for supplying a solution for liquid-phase epitaxy, a solution flow passage for allowing said solution supplied from said solution supply crucible to flow therein, and a solution recovery crucible for recovering said solution from said solution flow passage, said solution supply crucible being communicated with said solution flow passage and said solution recovery crucible being communicated with said solution flow passage,

wherein said solution flow passage has a substrate supply means provided in the vicinity of said solution supply crucible and a substrate recovery means provided in

the vicinity of said solution recovery crucible, wherein said plurality of substrates are consecutively supplied in said solution flow passage by said substrate supply means, followed by being moved in said solution flow passage by virtue of said flowing solution in said solution flow passage while said plurality of substrates being kept afloat on the surface of said flowing solution, whereby a crystal film is grown on the surfaces of said plurality of substrates which are in contact with said flowing solution, and said plurality of substrates having said crystal film grown thereon are consecutively recovered by said substrate recovery means.

12. The liquid-phase growth apparatus according to claim 11, wherein said substrate supply means has a substrate cassette, an extrusion member and a slant portion, wherein said plurality of substrates are accommodated in said substrate cassette, and said plurality of substrates accommodated in said substrate cassette are extruded one by one by said extrusion member to enter said solution flow passage through said slant portion.

13. The liquid-phase growth apparatus according to claim 11, wherein said substrate recovery means has a substrate cassette, a recovery member and a slant portion, wherein said plurality of substrates having said

crystal film grown thereon are extruded from said solution flow passage one by one onto said slant portion by said recovery member to enter in said substrate cassette.

14. The liquid-phase growth apparatus according to claim 11, wherein said solution flow passage has a grade which is gently sloped in a direction from the upstream side thereof toward the downstream side thereof so as to allow said flowing solution to flow in said solution flow passage at a desired flow speed.